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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,085	07/08/2003	Saikumar Jayaraman	2207/ 1212002	9663

7590 09/26/2005

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	10/616,085	JAYARAMAN ET AL.	
	Examiner	Art Unit	
	Robert Sellers	1712	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Robert Sellers. (3) _____
 (2) Carrie Beatus. (4) _____

Date of Interview: 14 September 2005.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
 If Yes, brief description: _____

Claim(s) discussed: 19.

Identification of prior art discussed: Tuller et al. Patent No. 4,042,550; Lim Patent No. 5,925,934 and Japanese Patent No. 2001-139669.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See attachment.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

 Examiner's signature, if required

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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic; video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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1. There is no support for the upper limit of the molecular weight of the curing agent of greater than about 1000 g/mole. Examples 1-6 on pages 10-12 of the specification only substantiate a molecular weight of about 1600 for a styrene-maleic anhydride copolymer. Example 7 on page 12 shows a cyclic olefin/maleic anhydride copolymer having a molecular weight of less than 5000. Support for a maximum molecular weight can only be obtained via calculation from the formulae of Schemes 1-6 on pages 6-8 wherein the basis for the calculation is revealed (i.e. the values for n and n' and the R groups).

2. Tuller et al. Patent No. 4,042,550 uses an alkylstyrene/maleic anhydride copolymer having a molecular weight of below about 1000 (col. 1, lines 56-58) which is encompassed by the claimed minimum of greater than about 1000. The curing agent could be limited to a maleic anhydride polymer wherein if the maleic anhydride polymer is a copolymer comprising norbornene, the molecular weight is from 971 (alleged to be the calculated minimum molecular weight of a norbornene/maleic anhydride copolymer) to the calculated maximum molecular weight, and wherein if the maleic anhydride polymer is other than the maleic anhydride polymer comprising norbornene, the molecular weight is from 1600 (supported by Examples 1-6) to the calculated molecular weight. Such a limitation would avoid Tuller et al. since the minimum molecular weight of 1600 for a maleic anhydride polymer other than that containing norbornene precludes the prior art disclosed value of below about 1000.

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3. A limitation of the curing agent with the proviso that if the maleic anhydride polymer is a styrene/maleic anhydride copolymer, the molecular weight is 1600 or greater does not overcome Tuller et al. Patentees disclose an alkylstyrene monomer, not styrene *per se*. Therefore, the prior art alkylstyrene/maleic anhydride copolymer with a molecular weight of below about 1000 does not pertain to the claimed proviso specific to styrene only, which is the sole monomer set forth in the specification on page 5, paragraph 11, the last line. Furthermore, the upper limit of greater than 1600 does not find support in the specification.

4. Lim Patent No. 5,925,934 does not recite a particular underfill composition and has been applied to merely supplement the teachings of Tuller et al. with respect to the utility as an underfill composition (Lim, col. 2, lines 28-36 and Figure 3, according to the Final rejection mailed April 11, 2005, page 2).

5. Japanese Patent No. 2001-136669 was applied in the non-Final rejection mailed September 21, 2004 (page 3) was withdrawn in the Final rejection mailed April 11, 2005, apparently in response to the amendment filed March 1, 2005 wherein the formula for the maleic anhydride polymer comprising norbornene has been inserted. However, Formula 4 of the maleic anhydride/norbornene copolymer of the Japanese patent (translation, page 1, paragraph 6) embraces a value for "n" of zero which falls within the ambit of the claimed formula.

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6. Scheme 6 on page 8 does not correctly depict the styrene/maleic anhydride repeating unit since the styrene ring is not directly attached to the repeating bond, but is linked via a polymerized vinyl group (see the structure of a styrenic monomer in Tuller et al., col. 2, lines 43-49).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers
Primary Examiner
Art Unit 1712